# Emma Strauss Kranich

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### **EDUCATION**

### Cornell University College of Engineering, Ithaca, NY

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**GPA:** 4.1 (out of 4.3), Candidate for Bachelor of Science in Electrical and Computer Engineering

**Honors:** Dean's List

Bethlehem Central High School, Delmar, NY

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Graduated June 2018

Expected 2022

**GPA: 97** (unweighted), **SAT:** 1580, **ACT:** 35

Honors: Art Honor Society, Math Honor Society, National Honor Society

Awards: National Merit Finalist, University of Rochester Bausch + Lomb Award, New York State Scholarship for Academic Excellence

#### RESEARCH EXPERIENCE

#### Erickson Lab, Cornell University

January 2019 - Present

- Execute experiments using H.E.R.M.E.S device for blood-plasma separation at the point-of-need then collect and analyze data
- Develop ways to utilize PCR without the need to separate further particles out of erythrocyte depleted blood
- Collaborate with Ph.D. student on creating point-of-need sepsis diagnostic and gonorrhea antibiotic resistivity testing devices

### Neuroscience Intern, Neural Stem Cell Institute, Rennselaer, NY

**Summer 2017** 

Assisted lab staff in developing regenerative stem cell therapies for diseases of the central nervous system

• Improved experience with lab techniques such as staining, microscopy, gel electrophoresis, feeding cells, and cleaning cells

# Muhlenberg Brain Camp, Muhlenberg College, PA

*Summer 2017* 

- Selected for free week-long program, conducted research with a professor on memory consolidation and PTSD
- Utilized virtual reality to study working memory consolidation, demonstrated that memories can be hidden from retrieval without being erased by using a visuospatial distractor during the consolidation phase
- Research picked up by Muhlenberg students to test on larger scale after preparing poster presentation and speaking at symposium

## WORK/VOLUNTEER EXPERIENCE

## Fibrodysplasia Ossificans Progressiva (FOP) Charity Events

2015 - 2017

- Orchestrated logistics for two charity events (2015 Awake for a Cure and 2017 Cheers for a Cure) for FOP research
- Raised \$76,000 for international FOP research center at the University of Pennsylvania

#### Mathematics and Science Tutor

2014 - 2018

• Helped younger students review class material and complete problem sets, created worksheets and practice tests

Food Service/Delivery Driver, Mercato's Pizzeria and Restaurant, Delmar, NY

Summer 2018

• Worked as hostess, served tables, and delivered for local Italian restaurant

# **EXTRACURRICULAR ACTIVITIES**

# Theta Tau Professional Engineering Fraternity

January 2019 – Present

Pi Class Philanthropy chair

- Underwent eight-week new member education training that focused on professional development and leadership skills
- Organize philanthropy events for fraternity to participate in, engage with peers through workshops such as resume critiques

# International Genetically Engineered Machine (iGEM)

October 2018 - Present

Product Developer

- Design and manufacture products throughout school year and summer to solve problems related to medicine, the environment, human and animal health
- Compete annually at iGEM Giant Jamboree in Boston with award-winning synthetic biology research team

# Hillel

September 2018 - Present

Engagement Committee Member

- Supervise social events for Jewish students that facilitates relationships between Jewish peers
- Participate in weekly events including Shabbat dinners, coffee tabs, and holiday celebrations

# Society of Women Engineers (SWE)

September 2018 - Present

General Publicity Committee Member

- Campaign about SWE events on campus such as networking dinners with a long-term goal of achieving equality in STEM
- Meet to discuss opportunities for professional development as well as foster relationships between fellow students

# Music

• Tenor Saxophone – Bethlehem Central High School Wind Ensemble (1st chair), Jazz Band (1st chair)

2010 - 2018

• **Piano** – Level 6 NYSSMA participant (Received score of 94 on most recent – 2017)

2008 - 2018

#### Sports

• Soccer – Cornell Intramural Soccer, Bethlehem Central High School (JV and Freshman Captain)

2012 - Present

• Track and Field – Bethlehem Central High School, ran mid-distance events including the 800m and 1500m

2014 - 2018

# SKILLS AND INTERESTS

Skills: Java (2 years), Python (1 year), and MATLAB (1 semester), HTML & CSS (basic)

Interests: Poetry, Hiking, Piano, Running, Painting, Skiing, Baking, Traveling, Sudoku, Crime Shows, Human Brains, Puns